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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,636	11/02/2001	Gagan Lal Choudhury	2001-0163A	8362
7590	07/12/2005		EXAMINER HAILE, FEBEN	
S H Dworetsky AT&T Corp Room 2A 207 One AT&T Way Bedminister, NJ 07921			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,636

Applicant(s)

CHOUDHURY ET AL.

Examiner

Feben M. Haile

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, and 21-24 is/are rejected.
- 7) ☒ Claim(s) 9, 11-20 and 25-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on February 15, 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/14/02 & 4/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8, 9, 10, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebsgaard et al. (US 2004/0218589), hereinafter referred to as Hebsgaard and in view of Beser (US 6,807,193).

Regarding claim 1, Hebsgaard discloses a method comprising: generating a map interval defining channel transmissions for a period of time (**page 1 paragraph 006; MAP information covers time periods for a channel**); flexibly partitioning the map interval into a request interval, a management interval, a data+signaling interval, and a voice interval (**page 1 paragraph 0006; MAP information consists of a request region, maintenance region and data region, it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data**).

Hebsgaard fails to teach the map intervals so as to optimize use of the channel bandwidth.

Beser discloses generating a map indicating the use of channels and time slots for bandwidth allocation (**figure 5 and column 3 lines 48-50**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard to incorporate the method of allocating bandwidth

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using a map taught by Beser. The motivation being to provide an efficient method of transmitting data traffic between a modem and termination system.

Regarding claim 2, Hebsgaard discloses transmitting the map interval on a downstream channel (**page 1 paragraph 0006; the MAP information is transmitted on a downstream channel by a CMTS**), wherein the map interval defines transmission for an upstream channel (**page 1 paragraph 0006; the MAP information covers an upstream channel**).

Regarding claim 3, Hebsgaard discloses generating a map interval for an upstream channel in a DOCSIS network (**page 1 paragraph 0006; MAP information that covers an upstream channel in a cable system; it is obvious to one of ordinary skill in the art that a cable system can provide data via a cable television network such as DOCSIS**).

Regarding claim 4, Hebsgaard discloses wherein the upstream channel corresponds to a hybrid-fiber-coax (HFC) connection (**page 2 paragraph 0023; cable termination system communicates with the cable modems via a hybrid fiber coaxial (HFC) network**).

Regarding claim 5, Hebsgaard discloses transmitting the map interval to one or more cable modems in the network (**page 1 paragraph 0006; MAP information is transmitted by the CMTS to all of the cable modems**).

Regarding claim 6, Hebsgaard discloses the limitations of base claim 1.

Hebsgaard fails to teach including locating the request interval and the management interval adjacent to each other.

Beser discloses a map with a request and maintenance portion next to each other (**Figure 5**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard to incorporate the concept of adjacent intervals in a map taught by Beser. The motivation being the same as in base claim 1.

Regarding claim 7, Hebsgaard discloses the limitations of base claim 1.

Hebsgaard fails to teach including locating one of the request intervals and the management interval at one end of the map interval.

Beser discloses using a second to last time slot in the map for a request portion and using the last time slot in the map for the maintenance portion (**Figure 5**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard to incorporate the concept of intervals at one end of the map taught by Beser. The motivation being the same as in base claim 1.

Regarding claim 8, Hebsgaard discloses the limitations of base claim 1.

Hebsgaard fails to teach assigning a unique service flow ID for each traffic stream.

Beser discloses a Service Flow ID defines mapping between a cable modem and a CMTS (**column 3 lines 55-56**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard to incorporate the concept of a Service Flow ID taught by Beser. The motivation being the same as in base claim 1.

Regarding claim 10, Hebsgaard discloses including placing voice unsolicited grants (Ugs) contiguously within the voice interval (**page 1 paragraph 0006; the data region of the MAP information can be unsolicited grants**).

Regarding claim 21, Hebsgaard discloses transmitting map intervals from a cable modem termination system on a downstream channel to a plurality of cable modems (**page**

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1 paragraph 0006; MAP information is transmitted on a downstream channel by a CMTS to all of the cable modems), wherein the map intervals define upstream traffic for the plurality of cable modems for a period of time in the future (page 1 paragraph 0006; MAP information covers all time periods on an upstream channel); and flexibly partitioning the map intervals into a plurality of sub intervals (page 1 paragraph 0006; MAP information consists of different regions).

Hebsgaard fails to teach the map based upon bandwidth requirements of the sub intervals.

Beser discloses generating a map indicating the use of channels and time slots for bandwidth allocation **(figure 5 and column 3 lines 48-50).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard to incorporate the method of allocating bandwidth using a map taught by Beser. The motivation being to provide an efficient method of transmitting data traffic between a modem and termination system.

Regarding claim 22, Hebsgaard discloses including partitioning the map intervals into at least a request interval, a management interval, a data+signaling interval, and a voice interval **(page 1 paragraph 0006; MAP information consists of a request region, maintenance region and data region, it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data).**

Regarding claim 23, Hebsgaard discloses the limitations of base claim 21.

Hebsgaard fails to teach including placing the management interval and the request interval together to form a contiguous interval.

Beser discloses a map with a request and maintenance portion next to each other **(Figure 5)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard to incorporate the concept of adjacent intervals in a map taught by Beser. The motivation being the same as in base claim 21.

Regarding claim 24, Hebsgaard discloses placing unsolicited grants (UGs) contiguously within the voice interval **(page 1 paragraph 0006; the data region of the MAP information can be unsolicited grants)**.

Allowable Subject Matter

2. Claims 9, 11-20, and 25-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a) Vogel (US 6742187), Upstream Bandwidth Allocation Map (MAP)-Initiated Channel Change Method for Data-Over-Cable Systems

b) Williams et al. (US 20020159513), System and Method for Shared Cable Upstream Bandwidth

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JH 0710812005


RICKY NGO
PRIMARY EXAMINER

7/11/05